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Taxonomy & Inventories

First report *Xenocorixa vittipennis* (Horváth) (Hemiptera, Corixoidea, Corixidae) from South Korea and checklist of the Korean Corixoidea

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Abstract

Background

Xenocorixa Hungerford, 1947 is a monotypic genus containing a single species, *Xenocorixa vittipennis* (Horváth, 1879), known only from China (Beijing, Hubei, Shandong, Shanghai, Tianjin, Zhejiang), Japan (Honshu, Shikoku, Kyushu) and Taiwan.

New information

Xenocorixa vittipennis (Horváth, 1879) is reported from South Korea for the first time. A diagnosis and supplementary description of this species are provided, together with illustrations of the adult and genitalia. A revised checklist of Korean Corixoidea is also provided.

Keywords

aquatic bugs, Heteroptera, new record, taxonomy, water boatmen

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Introduction

Corixoidea Leach, 1815 is one of the largest superfamilies of aquatic bugs (Nepomorpha), comprising approximately 35 genera and more than 600 species (Schuh and Slater 2020). Members of the Corixoidea are found worldwide and are the only water bugs that reach the Arctic (Hungerford 1948, Aukema et al. 1995). The Corixoidea includes three families: the Corixidae Leach, 1815 as proposed by Leach (1815); the Diaprepocoridae Lundblad, 1928, as established by Lundblad (1928) and the Micronectidae Jaczewski, 1924, as delineated by Jaczewski (1924). The classification status of the Diaprepocoridae and Micronectidae has been discussed in numerous studies (see Andersen and Weir (2004), Chen et al. (2005), Schuh and Slater (2020), Ye et al. (2020)). The phylogenetic analyses conducted by Ye et al. (2023) provided consistent support for the monophyly of each family.

Xenocorixa Hungeford, 1947 is a monotypic genus in the Corixidae. *Xenocorixa vittipennis* (Horváth, 1879) is the only species in this genus and is distributed in China and Japan (Hayashi and Miyamoto 2018, Xie et al. 2024). This genus is similar to *Hesperocorixa* Kirkaldy, 1908 in general appearance. The two genera can be distinguished by whether or not the lateral lobe of the prothorax is obscured by the mesoepimeron and by differences in the length-to-width ratio of the mesoepimeron.

Studies on the fauna of Corixidae in Korea have been conducted to a very limited extent. The first record of this family from Korea was by Okamoto 1924, who reported *Hesperocorixa distanti* (Kirkaldy, 1899) and *Sigara* (*Tropocorixa*) *substriata* (Uhler, 1896). Kwon et al. (2001) revised Korean Corixidae into three subfamilies (including Micronectinae), four genera and 16 species. After Kwon et al. (2001), there is no taxonomic research about Korean Corixidae and the Micronectidae is still treated as the subfamily Micronectinae in the checklists (Kwon et al. 2001, Cho and Kwon 2017, Park and Lee 2021). The aim of the study is to report *Xenocorixa vittipennis*, which is new to the Korean fauna. Comprehensive description and illustration of the species are provided. A revised checklist of Corixoidea from the Korean Peninsula is also provided herein.

Materials and methods

Materials for the study were collected for this study using a light trap (mercury vapour lamp, 220V/400W) and a stainless-steel strainer. The specimens were euthanised and preserved in 80% ethanol. Species identification was based on the keys and/or descriptions of Horváth (1879), Hungerford (1947) and Hayashi and Miyamoto (2018). All materials are deposited in the Laboratory of Insect Phylogenetics & Evolution, Jeonbuk National University (JBNU in Jeonju, South Korea) and the National Institute of Biological Resources (NIBR in Incheon, South Korea).

Genital preparations were made with 10% potassiun hydroxide (KOH) at 70°C for 10 minutes. After rinsing the KOH with distilled water, the genitalia were dissected from the

apex of the abdomen and then transferred to glycerine for further examination. The specimens and dissected genitalia were observed using a Canon EOS 6D digital camera with a Canon Macro Lens EF 100 mm (Canon, Japan), mounted on a Stack Shot Macro Package and dome illuminator Lecia LED 5000 HDI or a Tucsen Dhyana 400 DC digital camera (Tucsen Photonics, China) with Leica S8AP0 stereomicroscope (Leica Micoro systems, Germany) with the same dome illuminator. Photographs were taken and merged using Helicon Focus software (version 8.2.2. Pro, Helicon Soft, Ukraine) or Mosaic software (version 2.4) with Adobe Photoshop 2022 (version 23.5.1, Adobe, United States of America). Further detailed images of the antenna and genitalia were captured by utilising a Leica Z16 APO stereomicroscope (Leica Microsystems, Germany) with Optview software (Korea Lab Tech, Republic of Korea). The distribution map was created using QGIS 3.40.4 (OGSeo, Switzerland). For the information on the distribution map, we cited Xie et al. (2024) for China and the Red Data Books of each Prefecture and Hasegawa (2018) for Japan.

Taxon treatments

Xenocorixa Hungeford, 1947

Nomenclature

Xenocorixa Hungeford, 1947 - Hungerford (1947): 93.

Type species

Corisa vittipennis Horváth, 1879

Xenocorixa vittipennis Horváth, 1879

Nomenclature

Corisa vittipennis Horváth, 1879 - Horváth (1879): 151. Type locality: China, Sobsam-Timbu.

Corisa miyakei Matsumura, 1905 - Matsumura (1905): 64. Type locality: Japan, Nakano nr Tokyo.

Sigara horni Jaczewski, 1928 - Jaczewski (1928): 110. Type locality: China, Shantun, Yenchowfu.

Sigara vittipennis: Lundblad, 1933a - Lundblad (1933): 451.

Xenocorixa vittipennis: Hungerford, 1947 - Hungerford (1947): 93.

Materials

a. kingdom: Animalia; phylum: Arthropoda; class: Insecta; order: Hemiptera; family: Corixidae; genus: *Xenocorixa*; specificEpithet: vittipennis; country: South Korea; stateProvince: Gyeongsangnam-do; county: Hadong-gun; locality: Geumnam-myeon, Daesong-ri, Daesongsoryuji; verbatimElevation: 146 m; decimalLatitude: 34.977784; decimalLongitude: 127.858864; eventDate: 7 VII 2010; individualCount: 1; sex: female; lifeStage: adult; recordedBy: J.-W. Cheong; institutionCode: NIBR; occurrenceID: D6551C7A-6003-5ECE-B013-EFB347211D43

b. kingdom: Animalia; phylum: Arthropoda; class: Insecta; order: Hemiptera; family: Corixidae; genus: *Xenocorixa*; specificEpithet: vittipennis; country: South Korea; stateProvince: Jeollanam-do; county: Wando-gun; locality: Wando-eup, Jeongdo-ri; verbatimElevation: 8 m; decimalLatitude: 34.309312; decimalLongitude: 126.705769; eventDate: 26 VII 2024; individualCount: 21; sex: 8 males, 13 females; lifeStage: adult; recordedBy: J. Kim et al.; institutionCode: JBNU; occurrenceID: 419DA9EA-197A-58D7-9BA6-9B2EDA122EAE

c. kingdom: Animalia; phylum: Arthropoda; class: Insecta; order: Hemiptera; family: Corixidae; genus: *Xenocorixa*; specificEpithet: vittipennis; country: South Korea; stateProvince: Incheon; county: Ongjin-gun; locality: Deokjeok-myeon, Seopo-ri; verbatimElevation: 52 m; decimalLatitude: 37.214759; decimalLongitude: 126.116845; eventDate: 13 VIII 2024; individualCount: 1; sex: male; lifeStage: adult; recordedBy: J. Kim and D. Choi; institutionCode: JBNU; occurrenceID: A563CB13-359F-5EA2-AE7D-17652FF0D41E

d. kingdom: Animalia; phylum: Arthropoda; class: Insecta; order: Hemiptera; family: Corixidae; genus: *Xenocorixa*; specificEpithet: vittipennis; country: South Korea; stateProvince: Jeollanam-do; county: Wando-gun; locality: Wando-eup, Jeongdo-ri; verbatimElevation: 8 m; decimalLatitude: 34.309312; decimalLongitude: 126.705769; eventDate: 29 II 2025; individualCount: 45; lifeStage: 2 2nd instar nymphs, 43 3rd instar nymphs; recordedBy: J. Kim; institutionCode: JBNU; occurrenceID: FAA01C47-554F-5CEB-9708-1EFE59C2979F

e. kingdom: Animalia; phylum: Arthropoda; class: Insecta; order: Hemiptera; family: Corixidae; genus: *Xenocorixa*; specificEpithet: vittipennis; country: South Korea; stateProvince: Jeollanam-do; county: Hampyeong-gun; locality: Hampyeong-eup, Japung-ri; verbatimElevation: 113 m; decimalLatitude: 35.036441; decimalLongitude: 126.468439; eventDate: 23 VI 2025; individualCount: 1; sex: male; lifeStage: adult; recordedBy: J. Kim et al.; institutionCode: JBNU; occurrenceID: 32F21793-3B14-5517-B0D3-77DE2209940F

Description

Body length. ♂ 8.3–8.8 mm; ♀ 8.7–9.3 mm (based on 24 specimens).

Head (Fig. 1D, E and G). Whitish-yellow. Head slightly longer than the pronotal disc in dorsal view, its anterior margin protruding beyond the eyes. Male fovea depressed. Infraocular area reduced. Rostrum with transverse sulcations. The antennae four segments I–IV; antennal segments I–II shorter; antennal segment IV one-third the length of the antennal segment III.

Thorax (Fig. 1D–F, H and I). Yellowish-brown. Pronotum with distinct 6–7 dark transverse bands. Mesoepimeron raised broadly. Hemelytra with reticulation of dark

lines; membrane narrow. Fore-leg similar in male and female; front tibia short; pala long, flat, densely covered with palmar hairs in ventral side; male with peg row consisting of 14 pegs. Mid-leg with 2 apical claws; claws longer than tarsus. Hind-leg shorter than mid-leg; tarsus densely covered with swimming hairs. Metaxyphus triangular.

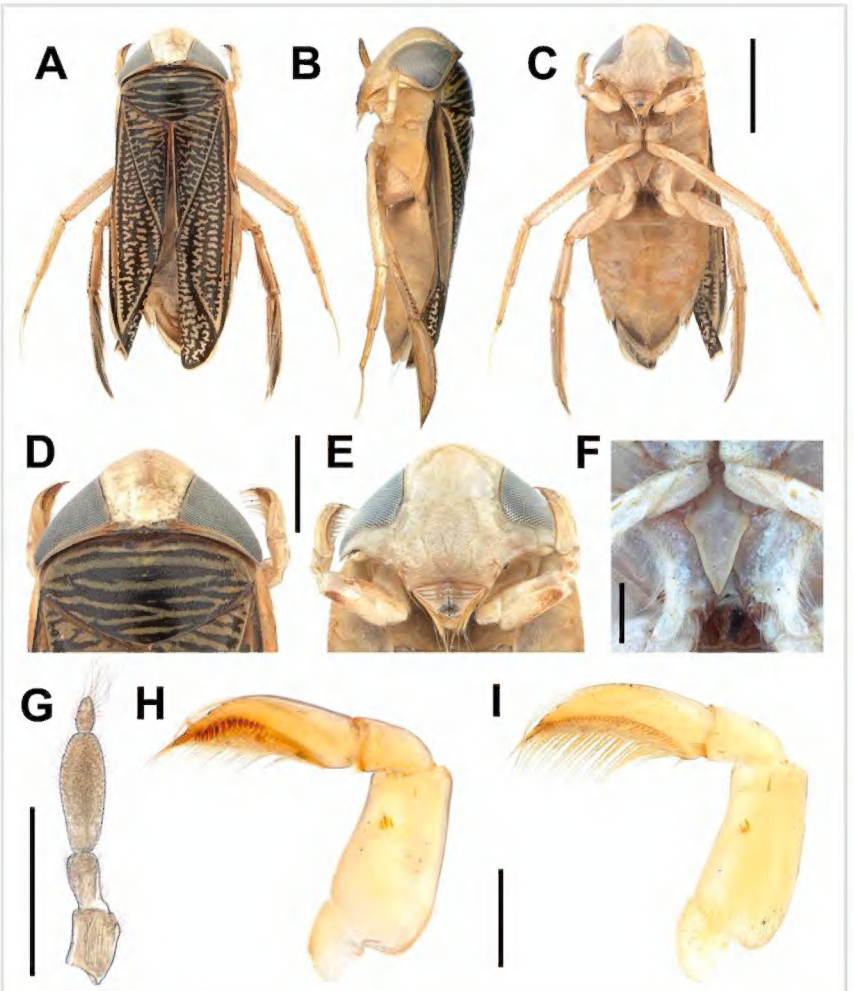

Figure 1. doi

Xenocorixa vittipennis (Horváth, 1879). **A–C** habitus of male in (A) dorsal, (B) lateral, (C) ventral; **D–E** head and pronotal disk of male in (D) dorsal, (E) ventral; F, metaxyphus; **G** antenna; **H** foreleg of male; **I** foreleg of female. Scale bars: A–C, 2 mm; D–E, 1 mm; F–I, 0.5 mm.

Abdomen (Fig. 2). Yellowish-brown. Male abdominal asymmetry dextral. Strigil consisting of 14 combs. Genital capsule yellowish-brown, oval in lateral view; aedeagus apical furcate; right paramere strongly broader median to apex; left paramere strongly curved at basal 1/3, tapering apically.

Diagnosis

Lateral lobe of prothorax is obscured posteriorly by mesoepimeron. Mesoepimeron is shorter than width in lateral view, with a secondary suture extending across it from the lateral bend to the inner basal angle of the mesoepimeron. The last antennal segment very short, one-third the length of the antennal segment III. The pruinose area along the base of the claval suture is short and broad. Males with dextral strigil (Hungerford 1947, Hasegawa 2018).

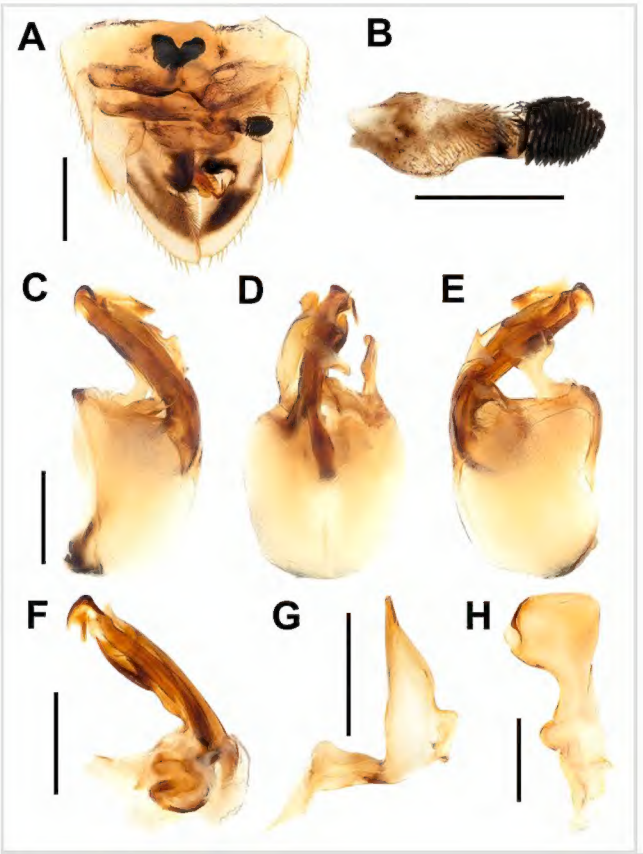

Figure 2. doi

Detail abdominal and genitalic features of *Xenocorixa vittipennis*. **A** tergite V–VIII of male in dorsal; **B** strigil; **C–E** genital capsule of male in (C) dorsal, (D) lateral, (E) ventral; **F** aedeagus in dorsal; **G** left paramere in dorsal; **H** right paramere in dorsal. Scale bars: A, 1 mm; B–G, 0.5 mm; H, 0.25 mm.

Distribution

China (North: Beijing, Tianjin; East: Shandong, Shanghai, Zhejiang; Central: Hubei (Xie et al. 2024)), Japan (Honshu, Shikoku, Kyushu (Nakajima et al. 2020)), Korea (new record), Taiwan (Fig. 4).

Notes

Xenocorixa vittipennis was observed in an agricultural reservoir (Fig. 3A) from South Korea near the coastal area (Fig. 5). Adults demonstrated a positive phototactic response and were collected through light traps (Fig. 3B). In February, 2nd and 3rd instar nymphs were collected in an agricultural reservoir in Wando-gun (Fig. 3C). Meanwhile, reports from Miyagi Prefecture, Japan, suggest that the species overwinters as eggs that hatch the following spring (Hasegawa 2018).

Most of the aquatic bugs are carnivorous. On the other hand, while zoophagy is the dominant feeding strategy in Corixidae, many species also consume other foods such as algae and detritus and their diet can vary significantly amongst different species, sexes or even populations of a single species, based on food availability (Haedicke et al. 2017, Xie et al. 2024). In this study, we documented the feeding behaviour of the 2nd and 3rd instar larvae of *Xenovorixa vittipennis* on frozen bloodworms under laboratory conditions (Fig. 3D).

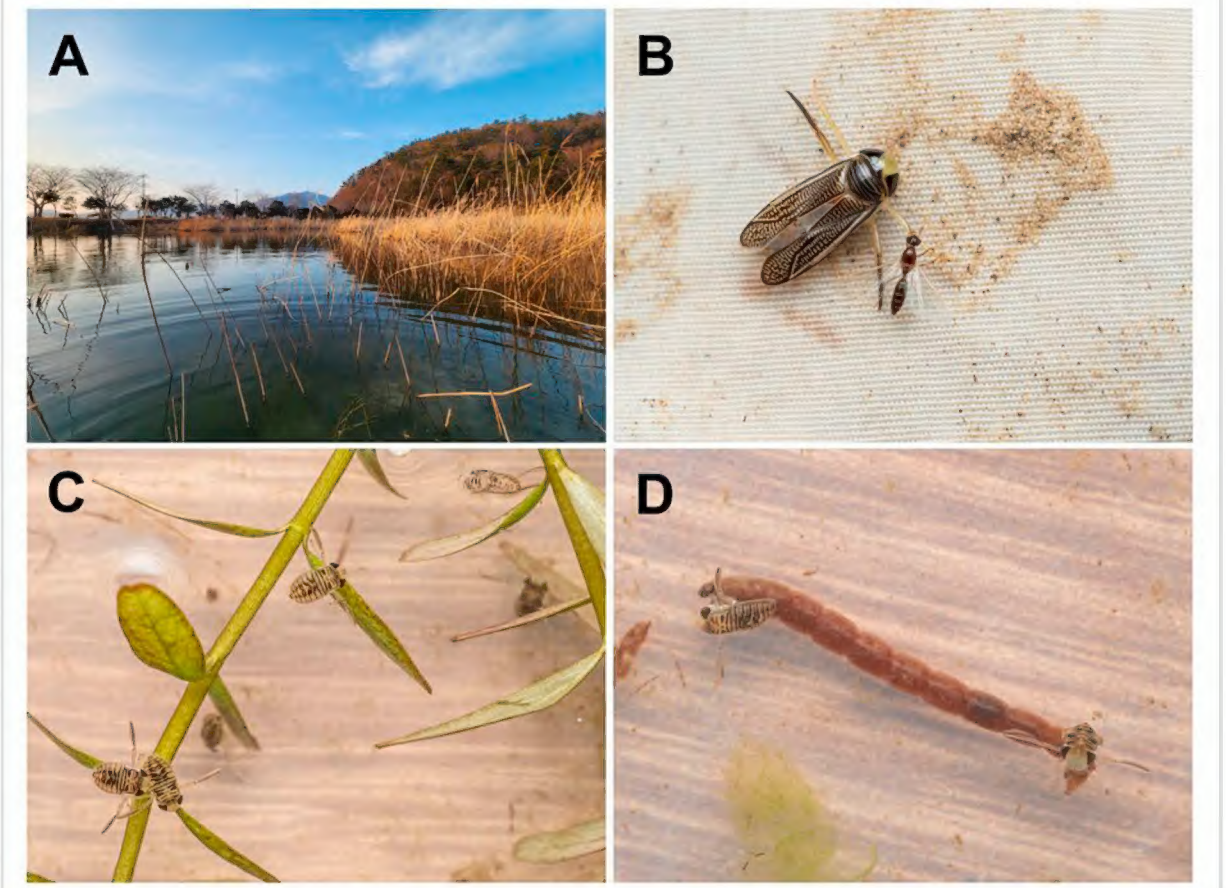

Figure 3. doi

A habitat (Wando-gun, South Jeolla Province); **B** female adult attracted to light trap; **C** 3rd instar nymphs; **D** 3rd instar nymphs feeding on frozen bloodworm.

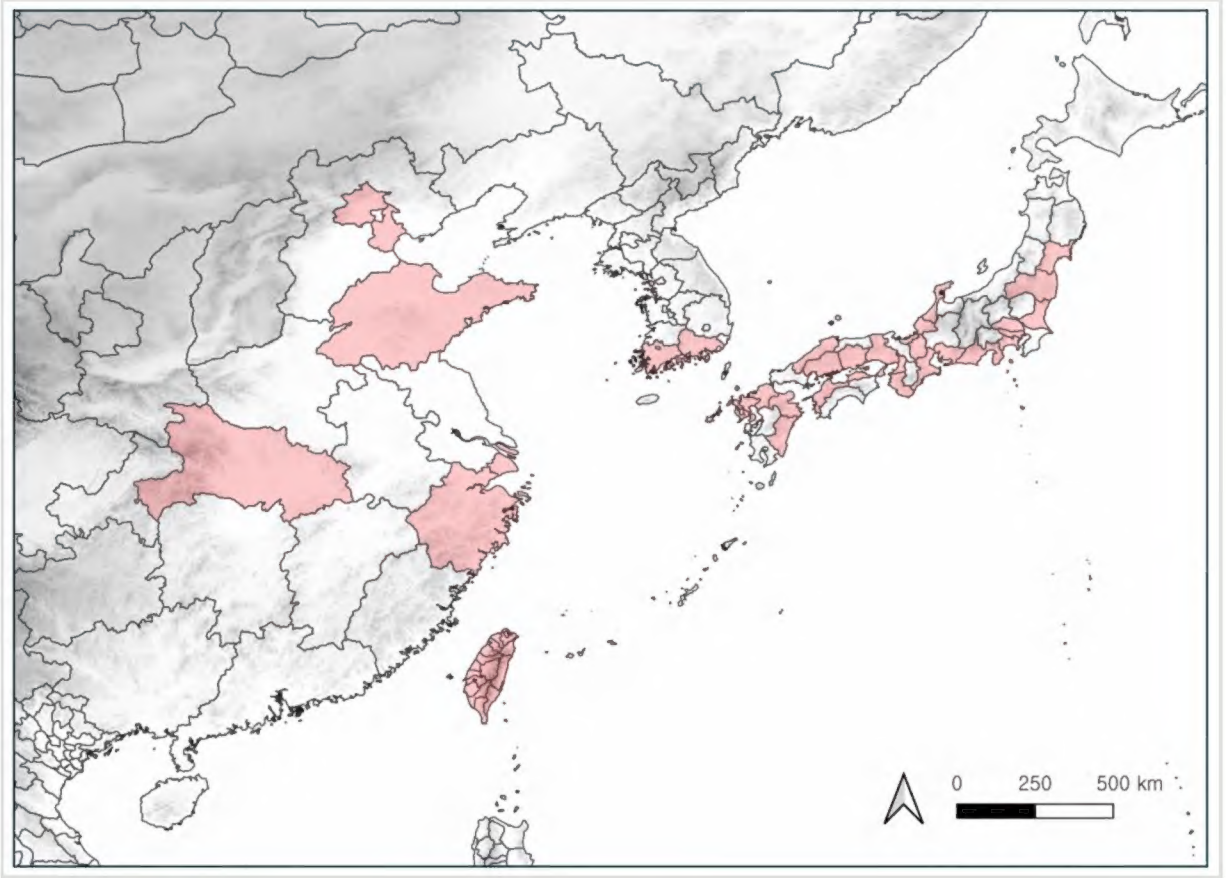

Figure 4. doi

Distribution of *Xenocorixa vittipennis* in east Asia.

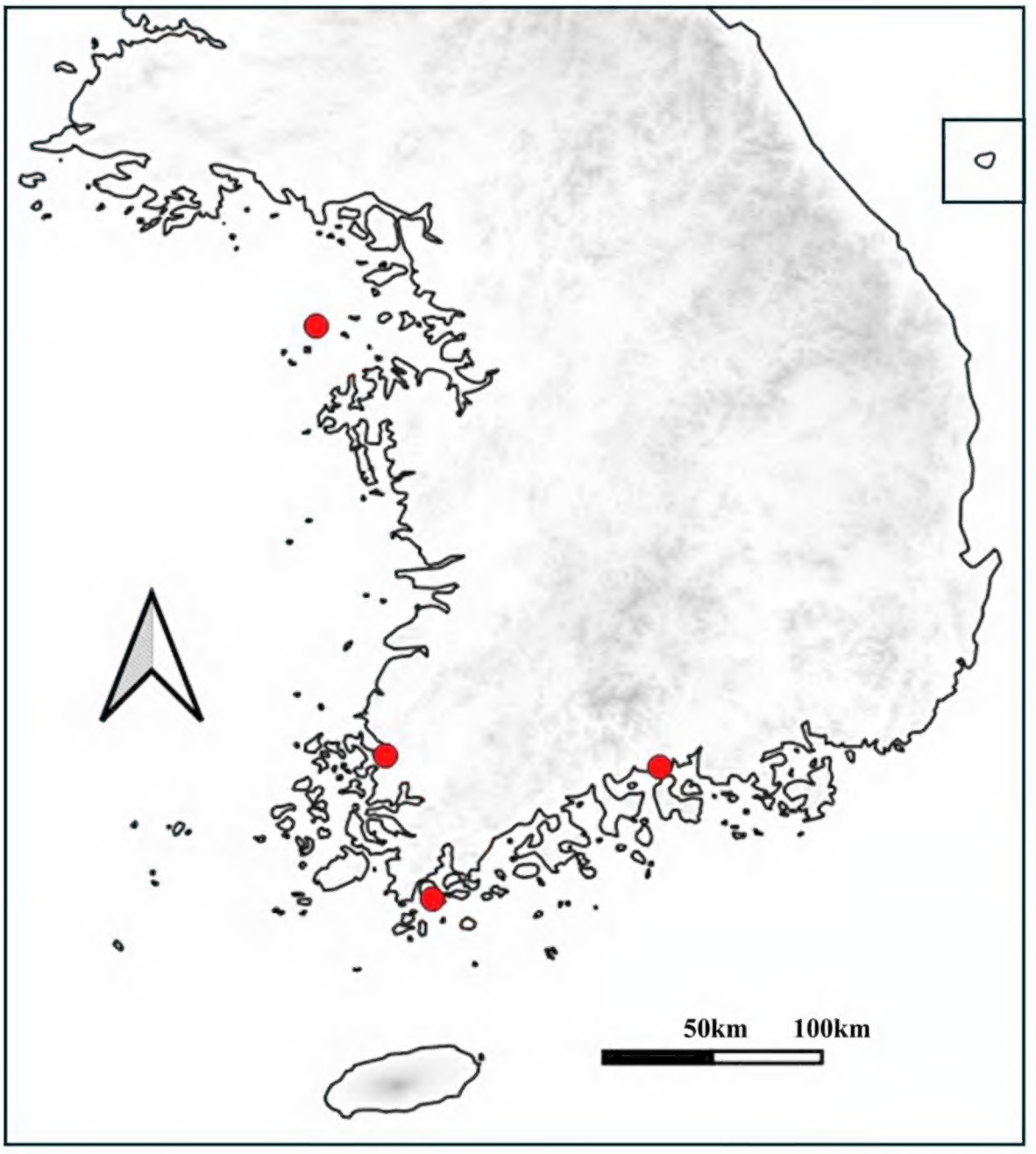

Figure 5. doi

Detailed distribution of *Xenocorixa vittipennis* in South Korea.

A checklist of Korean Corixoidea

Superfamily Corixoidea Leach, 1815

Family Corixidae Leach, 1815

Subfamily Corixinae Leach, 1815

Genus *Hesperocorixa* Kirkaldy, 1908

Hesperocorixa crassipala (Hungerford, 1940)

Distribution: Korea, China (Henan, Hubei, Jiangsu, Shaanxi), Vietnam (Xie et al. 2024).

Hesperocorixa distanti (Kirkaldy, 1899)

Distribution: Korea (Gyeonggi-do, Chungcheongnam-do, Gyeongsangbuk-do, Gyeonsangnam-do, Jeju-do), China (Guangxi Zhuang Autonomous Region, Guizhou, Hebei, Henan, Hubei, Jiangsu, Jiangxi, Shanghai), Japan (Hokkaido, Honshu), Russia (Far East) (Okamoto 1924, Doi 1935, Lee and Kwon 1991, Kwon et al. 2001, Hayashi and Miyamoto 2018, Xie et al. 2024)

Hesperocorixa hokkensis (Matsumura, 1905)

Distribution: Korea (Gyeonggi-do, Gyeongsangbuk-do, Gyeongsangnam-do), Japan (Honshu, Shikoku, Kyushu) (Lee 1971, Nam 1973, Kwon et al. 2001, Cho and Kwon 2017, Hayashi and Miyamoto 2018).

Hesperocorixa mandshurica (Jaczewski, 1924)

Materials

a. genus: *Hesperocorixa*; specificEpithet: mandshurica; country: South Korea; stateProvince: Gyeongsangnam-do; county: Changnyeong-gun; locality: Yueo-myeon, Sejin-ri, Upo Wetland; verbatimElevation: 85 m; decimalLatitude: 35.544722; decimalLongitude: 128.422500; eventDate: 1 VI 2009; individualCount: 4; sex: 2 males, 2 females; lifeStage: adult; recordedBy: J. Park; institutionCode: NIBR; occurrenceID: 91815FFE-0E3F-5592-BB03-C97D15A62D49

b. genus: *Hesperocorixa*; specificEpithet: mandshurica; country: South Korea; stateProvince: Gangwon-do; county: Hongcheon-gun; locality: Duchon-myeon, Cheonhyeon-ri, Mt. Gari; eventDate: 30 VI 2016; individualCount: 2; sex: 2 males; lifeStage: adult; recordedBy: H. Kim; institutionCode: NIBR; occurrenceID: 1BE7858D-7E64-54E2-AE71-D88D74EA8747

c. genus: *Hesperocorixa*; specificEpithet: mandshurica; country: South Korea; stateProvince: Chungcheongbuk-do; county: Jecheon-si; locality: Cheongpung-myeon, Dan-ri; verbatimElevation: 200 m; decimalLatitude: 36.972222; decimalLongitude: 128.163333; eventDate: 13 VI 2024; individualCount: 1; sex: 1 female; lifeStage: adult; recordedBy: J. Kim; institutionCode: JBNU; occurrenceID: B2FA7413-6ECB-5726-9C64-2ECF4CBF4705

Distribution: Korea (Gangwon-do, Chungcheongbuk-do, Gyeonsangnam-do), China (Beijing, Hebei, Heilongjiang, Henan, Inner Mongolia Autonomous Region, Jiangsu, Jilin, Liaoning, Shaanxi, Shandong, Shanxi, Tianjin), Japan (Honshu, Shikoku, Kyushu), Russia (Far East) (Hayashi and Miyamoto 2018, Xie et al. 2024).

Tribe Corixini Leach, 1815

Genus *Sigara* Fabricius, 1775

Subgenus *Pseudovermicorixa* Jaczewski, 1962

Sigara (*Pseudovermicorixa*) *septemlineata* (Paiva, 1918)

Materials

a. genus: *Sigara*; subgenus: *Pseudovermicorixa*; specificEpithet: septemlineata; country: South Korea; stateProvince: Jeollanam-do; county: Jangseong-gun; locality: Seosam-myeon, Songhyeon-ri; verbatimElevation: 79 m; decimalLatitude: 35.357500; decimalLongitude: 126.770556; eventDate: 29 IX 2023; individualCount: 6; sex: 1 males, 5 females; lifeStage: adult; recordedBy: J. Kim; institutionCode: JBNU; occurrenceID: 726EE717-8AFB-5843-A869-F73E7B89D913

b. genus: *Sigara*; subgenus: *Pseudovermicorixa*; specificEpithet: septemlineata; country: South Korea; stateProvince: Jeollanam-do; county: Wando-gun; locality: Sinji-myeon, Sin-ri; verbatimElevation: 6 m; decimalLatitude: 34.328333; decimalLongitude: 126.822222; eventDate: 1 VII 2025; individualCount: 2; sex: 1 males, 1 females; lifeStage: adult; recordedBy: J. Kim; institutionCode: JBNU; occurrenceID: 0FE6841B-7AE9-5307-B371-C9A11D958D99

Distribution: Korea (South: Gangwon-do, Gyeongsangbuk-do, Gyeongsangnam-do, Jellanam-do; North: Pyongyang), China (Fujian, Guizhou, Heilongjiang, Hongkong, Hubei, Inner Mongolia Autonomous Region, Guangxi Zhuang Autonomous Region, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Yunnan), India, Japan (Honshu, Shikoku, Kyushu, Nansei Islands Tsushima Island), Russia (Far East), Myanmar, Taiwan (Jaczewski 1963, Kwon et al. 2001, Hayashi and Miyamoto 2018, Xie et al. 2024).

Subgenus *Sigara* Fabricius, 1775

Sigara (*Sigara*) *weymarni* Hungerford, 1940

Distribution: Korea, China (Heilongjiang, Inner Mongolia Autonomous Region, Jilin, Liaoning), Mongolia, Russia (Xie et al. 2024).

Subgenus *Tropocorixa* Hutchinson, 1940

Sigara (*Tropocorixa*) *bellula* (Horváth, 1879)

Materials

a. genus: *Sigara*; subgenus: Tropocorixa; specificEpithet: septemlineata; country: South Korea; stateProvince: Gyeonggi-do; county: Hwaseong-si; locality: Songsan-myeon,

Gojeong-ri; verbatimElevation: 2 m; decimalLatitude: 37.256111; decimalLongitude: 126.745833; eventDate: 1 VII 2024; individualCount: 13; sex: 2 males, 11 females; lifeStage: adult; recordedBy: J. Kim; institutionCode: JBNU; occurrenceID: 68FF6ACA-6F77-570F-9F23-4666D418E09A

b. genus: *Sigara*; subgenus: Tropocorixa; specificEpithet: bellula; country: South Korea; stateProvince: Jellanam-do; county: Wando-gun; locality: Sinji-myeon, Sin-ri; verbatimElevation: 6 m; decimalLatitude: 34.328333; decimalLongitude: 126.822222; eventDate: 1 VII 2025; individualCount: 2; sex: 1 males, 1 females; lifeStage: adult; recordedBy: J. Kim; institutionCode: JBNU; occurrenceID: 28EB4C4B-F7E8-5A91-ADE8-9C05A96B6C15

Distribution: Korea (Gyeonggi-do, Jellanam-do), China (Anhui, Guangxi Zhuang Autonomous Region, Guizhou, Henan, Hubei, Hunan, Inner Mongolia Autonomous Region, Jiangsu, Jiangxi, Ningxia Hui Autonomous Region, Shaanxi, Shanxi, Tianjin, Zhejiang), Japan (Honshu, Kyushu, Tsushima Island), Russia, Taiwan (Hayashi and Miyamoto 2018, Xie et al. 2024).

Sigara (*Tropocorixa*) *formosana* (Matsumura, 1915)

Distribution: Korea (Gyeonggi-do), Japan (Nasei Islands), Taiwan, Vietnam (Lee 1971, Hayashi and Miyamoto 2018, Xie et al. 2024).

Sigara (*Tropocorixa*) *gaginae* Jaczewski, 1960

Distribution: Korea, China (Anhui, Guizhou Heilongjiang, Hubei, Hunan, Inner Mongolia Autonomous Region, Jiangsu, Jiangxi, Jilin, Liaoning, Zhejiang), Russia (Xie et al. 2024).

Sigara (*Tropocorixa*) *nigroventralis* (Matsumura, 1905)

Distribution: Korea (Pyongyang), Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima Island, Nansei Islands), Russia (Far East), Taiwan (Jaczewski 1963, Cho and Kwon 2017, Hayashi and Miyamoto 2018).

Sigara (*Tropocorixa*) *paivai* Lundblad, 1928

Distribution: Korea, Sumatra, Thailand, India (Kwon et al. 2001).

Sigara (*Tropocorixa*) *substriata* (Uhler, 1896)

Distribution: Korea (South: Gangwon-do, Gyeonggi-do, Gyeongsangbuk-do, Gyeongsangnam-do, Jeollabuk-do, Jellanam-do, Jeju-do; North: Pyongyang), China (Heilongjiang, Henan, Zhejiang), Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (Far East) (Kwon et al. 2001, Hayashi and Miyamoto 2018, Xie et al. 2024).

Genus *Xenocorixa* Hungerford, 1947

Xenocorixa vittipennis (Horváth, 1879)

Distribution: Korea (Incheon, Gyeongsangnam-do, Jellanam-do), China (Beijing, Hubei, Shandong, Shanghai, Tianjin, Zhejiang), Japan (Honshu, Shikoku, Kyushu), Taiwan (Hayashi and Miyamoto 2018, Xie et al. 2024).

Subfamily Cymatiainae Walton, 1940

Genus *Cymatia* Flor, 1860

Cymatia apparens (Distant, 1911)

Materials

a. genus: *Cymatia*; specificEpithet: apparens; country: South Korea; stateProvince: Gyeongsangnam-do; county: Tongyeong-si; locality: Gwangdo-myeon, Nosan-ri; eventDate: 31 IV 1964; individualCount: 1; sex: male; lifeStage: adult; recordedBy: C. Lee; institutionCode: NIBR; occurrenceID: 7F70745C-88C8-5C6A-B2C1-D92D9CF6F61A

b. genus: *Cymatia*; specificEpithet: apparens; country: South Korea; stateProvince: Gyeongsangbuk-do; county: Ulleung-gun; locality: Buk-myeon, Hyeonpo-ri; verbatimElevation: 192m; decimalLatitude: 37.517156; decimalLongitude: 130.815867; eventDate: 12 VII 2024; individualCount: 23; sex: 11 males, 12 females; lifeStage: adult; recordedBy: J. Kim; institutionCode: NIBR; occurrenceID: EBD3FA00-632E-5A8F-95D7-493D92EE9A13

Distribution: Korea (Gyeongsangbuk-do, Gyeongsangnam-do), China (Beijing, Guizhou, Henan, Hubei, Hunan, Inner Mongolia Autonomous Region, Jiangsu, Jiangxi, Shaanxi, Shandong, Shanxi, Tianjin, Zhejiang), India, Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (Far East) (Hayashi and Miyamoto 2018, Xie et al. 2024).

Family Micronectidae Jaczewski, 1924

Subfamily Micronectinae Jaczewski, 1924

Genus *Micronecta* Kirkaldy, 1897

Subgenus *Basileonecta* Hutchinson, 1940

Micronecta (*Basileonecta*) *sahlbergii* (Jakovlev, 1881)

Material

a. genus: *Micronecta*; subgenus: *Basileonecta*; specificEpithet: sahlbergii; country: South Korea; stateProvince: Jeollanam-do; county: Gochang-gun; locality: Buan-myeon, Sudong-ri; verbatimElevation: 84 m; decimalLatitude: 35.537048; decimalLongitude: 126.651914; eventDate: 7 VII 2025; individualCount: 15; sex: 3 males, 12 females; lifeStage: adult; recordedBy: J. Kim; institutionCode: JBNU; occurrenceID: A6E485A0-D690-5EE6-9EB6-78C8BFC8F2EF

Distribution: Korea (South: Jeollanam-do; North: Pyongyang), China (Anhui, Guangdong, Guizhou, Hainan, Hebei, Heilongjiang, Henan, Hubei, Hunan, Inner Mongolia Autonomous Region, Jiangsu, Jiangxi, Shandong, Shannxi, Shanxi, Sichuan, Tianjin, Yunnan, Zhejiang), Iran, Japan (Honshu, Shikoku, Kyushu, Nasei Islands), Russia (Far East), Taiwan, Vietnam (Jaczewski 1963, Hayashi and Miyamoto 2018, Xie et al. 2024).

Micronecta (*Basileonecta*) *sedula* Horváth, 1905

Distribution: Korea (South: Chungcheongnam-do, Gyeongsangbuk-do, Jellabuk-do, Jeju-do, North: Pyongyang), China (Anhui, Hubei, Hunan, Inner Mongolia Autonomous Region, Jiangsu, Jiangxi, Tianjin, Zhejiang), Japan (Honshu, Shikoku, Kyushu), Russia (Far East), Vietnam (Jaczewski 1963, Lee and Kwon 1991, Kim 1993, An 1998, Hayashi and Miyamoto 2018, Xie et al. 2024).

Subgenus *Micronecta* Kirkaldy, 1897

Micronecta (*Micronecta*) *guttata* Matsumura, 1905

Material

a. genus: *Micronecta*; subgenus: *Micronecta*; specificEpithet: guttata; country: South Korea; stateProvince: Gwangju; county: Buk-gu; locality: Sinyong-dong; verbatimElevation: 19 m; decimalLatitude: 35.217778; decimalLongitude: 126.862222; individualCount: 2; sex: 2 females; lifeStage: adult; recordedBy: J. Kim; institutionCode: JBNU; occurrenceID: 7F76F09A-9C19-5120-BB15-23CB7E3DBCE8

Distribution: Korea (Gyeongsangbuk-do, Gwangju), China (Fujian, Guangdong, Guangxi Zhuang Autonomous Region, Inner Mongolia Autonomous Region), Japan (Honshu, Shikoku, Kyushu), Kazakhstan, Mongolia, Russia (Far East, East Siberia), Taiwan (Lee and Kwon 1991, Cho and Kwon 2017, Hayashi and Miyamoto 2018, Xie et al. 2024).

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